****** CONFIDENTIAL *******
******* PREDECISIONAL DOCUMENT *******

SUMMARY SCORESHEET FOR COMPUTING PROJECTED HRS SCORE

SITE NAME: McDonnell Douglas Aerospace West

CITY: Huntington Beach COUNTY: Orange

EPA ID #: CAD008384588 EVALUATOR: Mark Lane

JOB #: 62316.48 SCORE DATE: 09/09/94

LATITUDE: 33° 44' 55" N LONGITUDE: 118° 2' 05" W T/R/S 5S / 11W / 9

THIS SCORESHEET IS FOR A: ☐ PA ☒ SI ☐ ESI ☐ SI Sum ☐ PA Sum ☐ Other (Specify)

RCRA STATUS (check all that apply): ☒ Generator
☐ Small Quantity Generator
☐ TSDF
☐ Not listed in RCRA Database as of (date of print out) 2/22/94

STATE SUPERFUND STATUS

☐ BEP (date) _____ ☐ WQARF (date) _____

☒ No State Superfund Status (date) 01/10/89

	S pathway	S^2 pathway
Groundwater Migration Pathway Score (S_{gw})	20.93	438.06
Surface Water Migration Pathway Score (S_{sw})	*	
Soil Exposure Pathway Score (S_s)	*	
Air Migration Pathway Score (S_a)	*	
$S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2$		438.06
$(S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2)/4$		109.52
$\sqrt{(S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2)/4}$		10.47

Pathways not assigned a score (explain):

Surface water, soil exposure and air pathways were evaluated qualitatively and not quantitatively because the entire site is paved and there no source is available for the surface water pathway or soil exposure, and there are no air emission sources at the site.

GROUNDWATER MIGRATION PATHWAY SCORESHEET

Factor Categories and Factors

Likelihood of Release	Maximum Value	Projected Score	Rationale	Data Qual.
1. Observed Release	550	0	GW-1	H
2. Potential to Release				
2a. Containment	10	10	GW-2	H
2b. Net Precipitation	10	3	GW-3	H
2c. Depth to Aquifer	5	3	GW-4	H
2d. Travel Time	35	5	GW-5	E
2e. Potential to Release [lines 2a x (2b+2c+2d)]	500	110		
3. Likelihood of Release (higher of lines 1 or 2e)	550	110		
Waste Characteristics				
4. Toxicity/Mobility	a	100	GW-6	H
5. Hazardous Waste Quantity	a	100	GW-7	H
6. Waste Characteristics (lines 4x5, then use table 2-7)	100	10		
Targets				
7. Nearest Well	50	9	GW-8	H
8. Population [d]				
8a. Level I Concentrations	b	0		
8b. Level II Concentrations	b	0		
8c. Potential Contamination	b	1556	GW-9	E
8d. Population (lines 8a+8b+8c)	b	1556		
9. Resources	5	5	GW-10	E
10. Wellhead Protection Area	20	0	GW-11	H
11. Targets (lines 7+8d+9+10)	b	1570		
Likelihood of Release				
12. Aquifer Score [(lines 3 x 6 x 11)/82,500] [c]	100	20.93		

Groundwater Migration Pathway Score

13. Pathway Score (Sgw), (highest value from line 12 for all aquifers evaluated)	100	20.93 [c]	

Aquifer Evaluated Jefferson

a Maximum value applies to waste characteristics category.
b Maximum value not applicable.
c Do not round to nearest integer.
d Use additional tables.

GROUNDWATER PATHWAY CALCULATIONS

8. Population

Actual Contamination

Well Identifier	Contaminant Detected	Concentration (note units)	Benchmark	(A) Apportioned Population Well Serves	(B) Level* Multip.	(A x B)
					Sum (AxB) Level I	
					Sum (AxB) Level II	

* Multipliers
- Level I = 10
- Level II = 1

Potential Contamination

Distance (Miles)	Total Number of Wells Within Distance Ring	Total Population Served by Wells Within Distance Ring	Distance-Weighted Population Values "Other Than Karst" (Table 3-12)** (A)
0 - 1/4	0	0	0
> 1/4 to 1/2	0	0	0
> 1/2 to 1	1	9,900	1,669
> 1 to 2	7	25,717	2,939
>2 to 3	14	54,127	6,778
>3 to 4	31	79,399	4,171
		Sum (A)	15,557

Potential contamination = $\frac{\text{Sum (A)}}{10}$ = 1556

** For drinking water wells that draw from a karst aquifer, see the Distance-Weighted Population Values for "Karst" in Table 3-12.

Aquifer Evaluated Jefferson

HRS Rationale
McDonnell Douglas Aerospace West - Huntington Beach
EPA ID #CAD008384588

Groundwater Pathway

GW-1: An observed release cannot be established at this time because no sampling data are available for the aquifer of concern.

GW-2: Analytical results of soil samples collected after the removal of undergound storage tanks indicated the presence of volatile organic compounds.

GW-3: According to HRS Table 4-3, the net precipitation factor value is 3.

GW-4: The depth to the aquifer of concern is estimated to be 200 feet below ground surface (bgs).

GW-5: Several layers of silty clay 10 to 20 feet thick are part of the geologic strata from ground surface to a depth of 65 feet. A conservative assumption is that 3 to 5 feet of clay are in the interval between the deepest contamination and the top of the aquifer. The travel time factor value is 5, according to Table 3-7 of the Federal Register.

GW-6:

TABLE 1
TOXICITY / MOBILITY FACTORS

HAZ. SUBSTANCE	TOXICITY	MOBILITY	TOX/.MOB FACTOR
Acetone	10	1	10
Freon 113	1	0.01	0.01
TCE	10	0.01	0.1
1,1,1-TCA	10	0.01	0.1
1,1,2-TCA	1000	0.01	10
Chloroform	100	1	100
Methylene Chloride	10	1	10
Toluene	10	0.01	0.1
1,1-DCE	100	0.01	1

GW-7: Contaminated Soil (Tier C Volume)

The area of contamination, assuming a radius of 200 feet, is approximately 125,600 square feet. This value, multiplied by a depth of 60 feet, is approximately 279,111 cubic yards. The volume divided by 2,500 is approximately 111.6. This hazardous waste quantity value is assigned a value of 100 according to Table 2-6 of the Federal Register.

GW-8: According to the most recent water purveyor information, the nearest drinking water well is within 1/2 to 1 mile of the site.

GW-9: The City of Huntington Beach has ten wells, which serve a population of 198,000. Seven of the 10 wells are within 4 miles of the site. The Huntington Beach water supply is augmented by 50 percent with surface water from the Metropolitan Water District (MWD). The effective population served by well water is 99,000. Each of the 10 wells serves an average population of 9,900.

The City of Garden Grove has eleven wells, which serve a population of 134, 141. Three of the wells are within 4 miles of the site. Well water is not augmented with surface water. Each of the three wells serves an average population of approximately 12,194.

The Southern California Water Company has 16 active wells supplying 25,634 connections. The county multiplier for Orange County is 1.077. The population served by the Southern California Water Company is 27,608. Well water from this purveyor is augmented by 11 percent with surface water from the MWD. The effective population served by well water is 24,571. Each of the 16 wells in the system serves an average population of 1,536.

The City of Westminster has 15 wells, which serve a population of 80,000. Fourteen of the 15 wells are within 4 miles of the site. The Westminster water supply is augmented by 30 percent with surface water from the MWD. The effective population served by groundwater is 56,000. Each of the 15 wells serves an average population of 3,733.

The City of Seal Beach has three wells, which serve a population of approximately 28,000. All three wells are within 4 miles of the site. The Seal Beach water supply is augmented by 20 percent with surface water from the MWD. The effective population served by well water is 22,400. Each of the three wells serves an average population of 7,466.

Table 2 displays the score for potential contamination.

TABLE 2
DISTANCE -WEIGHTED POPULATION VALUES

DISTANCE (MILES)	NO. OF WELLS	TOT. POP. SERVED	VALUES
0 to 1/4	0	0	0
>1/4 to 1/2	0	0	0
>1/2 to 1	1	9,900	1,669
>1 to 2	7	25,717	2,939
>2 to 3	14	53,925	6,778
>3 to 4	31	79,197	4,171

GW-10: The rationale is based on the definition of "Resources" on page 51604 of the Federal Register.

GW-11: According to the *Reference Handbook for the Hazard Ranking System (HRS) Process and Report Preparation, February 1992,* there are no Well Head Protection Areas designated in Region 9.